ATTACHMENT - REMARKS

Applicant wishes to thank the Examiners, Ms. Miller and Mr. Reinhart, for the courteous interview granted to Applicants' attorney on November 1, 2010. In accordance with Rule 133(b), the reasons brought out at the interview as warranting favorable action are set forth below.

This application now includes new independent claim 25 together with dependent claims 2-18, 20, 21, and 26-30.

For reasons explained at the interview, claim 25 as well as its dependent claims are clearly allowable over the applied references.

Minor corrections have been made in the specification and in a revised drawing primarily to correct certain inconsistencies in the numerals as used in the specification and in the drawings.

The present invention provides a structure for creating rectilinear laminar airstreams of air out of the discharge opening of a supply device for the purpose of reducing turbulence, and in particular, for producing a distinct zone of non-turbulent air with a minimum peripheral area of turbulence.

This goal is achieved in accordance with the present invention by providing a housing for receiving inlet air and discharging that air under pressure through a discharge opening, wherein the discharge opening includes an inner part and an outer part. The inner part is formed by porous material of sufficient thickness to offer resistance to air coming from the inlet. The outlet part comprises a plurality of substantially parallel passages which are packed together with inlet ends adjacent the exterior of the inner part and wherein the passages are rectilinear and of uniform

thickness and wherein each passage has substantially the same diameter along its entire length from its inlet end to the outlet end and has a length at least four times their width.

First, to clarify, the passages of the present invention, as set forth in the specification, are rectilinear, meaning formed by straight lines from end to end and are of a uniform thickness. By analogy, if the cross section of the passages were circular, as in the preferred embodiment as described in the specification and shown in the drawings, the passages would be like a bundle of straws bound together. In this case, if the inner ends of the passages are adjacent the exterior of the inner part with the passages extending outwardly from a curved surface, there would be some spaces between the outer ends of the passages as shown for example in Figure 3. Also, while the passages would appear to be parallel to each other, because of the curvature of the discharge opening, they could not all be mathematically perfectly parallel to each other. Thus, claim 25 now recites that the passages are substantially parallel to each other, which term finds support in the specification.

At the interview, a good portion of the discussion centered on the shape of the individual passages in the present invention and in the passages of the honeycomb 3 in the German patent. As the Examiner noted in the Interview Summary, defining the passages better as having parallel walls was suggested since the prior art did not seem to have walls that are parallel. This is precisely correct because as discussed in greater detail below, the passages of the honeycomb 3 of the German patent necessarily form an outwardly expanding cone wherein the walls of the passages are of course not parallel. Claim 25 now clearly recites the parallel aspect of the walls of the individual

passages by reciting that each passage has substantially the same diameter along its entire length from its inlet and to its outlet end.

The Interview Summary also suggests that in the Examiner's view the parallel wall limitation might be new matter. In fact, the terminology relating to this parallel wall aspect, as added to claim 25, finds clear support in the application as originally filed. At page 5, the specification states that where the passages are preferably circular, they have substantially the same diameter along their entire length, which necessarily means that the walls of each passage are parallel from end to end. But this support is not necessarily limited to a circular cross section. While the preferred embodiment of the passages are circular, the dictionary definition of "diameter" includes the length of a line through the center, which is applicable whether the passage is circular or of any other shape. Moreover, a conically expanding passage, as in the German patent, necessarily does not meet this definition.

Claim 1 was rejected as not being unobvious over Kristensson (US 5,167,577) in view of the German patent (DE 26 08 792). Whatever might have been the relevance of these references to previous claim 1, it is respectfully submitted for the reasons set forth below that claim 25 is clearly unobvious over these references, and further that there are no other references of record to be taken alone or combined with Kristensson or the German patent to render claim 25 obvious.

As noted above, the discussion at the interview centered primarily on the structure of the honeycomb 3 of the German patent. The inlet pipe 1 in the German patent has a curved discharge opening extending over approximately 120°. The honeycomb 3 comprises a plurality of nozzles, each of which has a conical angle which

is described as less than 15°. A honeycomb, by its definition, is a unified structure hexagonal in cross section with the walls of one cell also forming the walls of adjacent cells. By definition, it is therefore a unified structure with no spaces between the individual cells. Unlike the present invention which comprises a plurality of individual passages, it must necessarily, axiomatically follow that if one were to place the inner ends of a honeycomb structure on a curved surface, the individual cells must expand conically outwardly from their inner ends to their outer ends. This is exactly what the German patent states, and in fact no other structure is physically possible with respect to a honeycomb on a curved surface. Thus, the figure of 15° or slightly less necessarily applies to the individual cells or nozzles of the honeycomb 3. The English translation of the German patent, which is already on file in this application, further clarifies this necessary structure by reciting at the top of page 3 of the translation, a "honeycombed jet casing" with "numerous radially arranged expanding jets, below an angle which is smaller than 15°" and a "conical expansion of the supply air and a reduction of the exit velocity". There was also some discussion at the interview as to whether a honeycomb had to be straight or could be conical. In fact, honeycombs are often conical, perhaps more often than not. Consider for example the honeycomb on a curved honey bee's nest (see the attached Wikipedia page).

In addition to the above discussion, it will be noted that in the German patent, the conical honeycomb 3 does not even comprise the outer part since the outer part is a mesh which would hinder the flow of uniformly distributed partial airstreams of a reduced turbulence, as recited in claim 25.

The rejection of claim 1 used as a primary reference the Applicant's own prior patent ("Kristensson"), filed 15 years earlier, which is directed to the same general subject matter of the present invention. As stated in the present specification, Kristensson, of which the present application is an improvement, discharges airstreams which are unguided as they flow out in different directions and thereby cause undesired turbulence. The present invention represents a substantial departure from and improvement over Kristensson. Kristensson included a porous inner part. However, it provided no outer part remotely similar to the outer part of the present invention.

In the Office Action the Examiner mischaracterizes the outer part 16 by referring to simple openings in a wire netting as "passages". In fact, the Office Action, without any factual support, states that Kristensson has the very wording of previous claim 1, "for making a turbulent zone around the clean-air zone more narrow so that the turbulence around the clean-air zone hereby becomes less", and supports the presence of this structure in the prior art by referring to column 3, lines 5-11 and 25-30. These passages from the Kristensson specification are totally different and do not in any way remotely even suggest this wording which the Examiner quoted from claim 1. Lines 5-11 recite structural details of the porous material 13 while lines 26-30 recite discharge speeds in the dwelling zone, etc. The rejection also incorrectly states that the Kristensson patent shows "and wherein the airflow generated through said air permeable body [is] substantially laminar". Here, there is no reference to any potion of the Kristensson specification.

Stated differently, after mischaracterizing holes in wire mesh 16 as passages, the Office Action goes on to state that relevant passages from claim 1 are found in the

Kristensson specification at locations which have nothing to do with flow through these openings in wire mesh 16 and in fact relate only to the porous body 13.

This erroneous unsupported interpretation of Kristensson is then combined with the teachings of the German patent in order to effect the § 103 rejection. In doing so, however, the Office Action misstates the structure of the German patent. Among other things, the Office Action states at page 6 that (with reference to claim 4) the passages have the same or substantially the same diameter along their entire length. However, for reasons discussed above, this particular feature is clearly and unequivocally not present in the German patent.

In any event, however the references may have been applied to previous claim 1, it is clear that there is no legal basis whatsoever to conclude that any combination of Kristensson and the German patent render claim 25 obvious. As noted above, it is stretching the language quite a bit to say that openings in the wire mesh 16 of Kristensson comprise passages. And even if that were true, the German patent with its honeycomb structure 3 of conically outwardly expanding cells is totally different from the present invention, as recited in claim 25.

Also, the result of this different structure is also recited in claim 1, i.e., the fact that the structure provides partial airstreams which are generally rectilinear and substantially laminar providing uniformly distributed partial airstreams of reduced turbulence in said zone.

An obviousness-type rejection is now governed by the United States Supreme Court case of *KSR Int'l v. Teleflex, Inc.*, 550 U.S. 398 (2007). Under *KSR*, the

combination of Kristensson and the German patent to support any conclusion of obviousness in this application is totally impermissible.

The Supreme Court in *KSR* noted that a claim comprising several elements is not proved obvious merely by demonstrating that each element was independently known. Rather, the Court stated that it is important to identify a reason that would have prompted a person of ordinary skill in the art to combine the elements of the prior art to arrive at the present invention. The Final Rejection has given no reason whatsoever why anyone would even conceive, much less find obvious, any combination of the German patent and Kristensson.

But in fact, the *KSR* guidelines for supporting a combination rejection are not even reached in the present situation wherein the secondary reference does not even disclose the structural features ascribed to it by the Examiner so that any combination of the references would not even arrive at the invention of claim 25.

The dependent claims are allowable for at least the same reasons as claim 25 and also because they recite new, distinct and patentable inventions not shown, suggested or rendered predictable by the prior art.

On March 26, 2008 an Information Disclosure Statement (IDS) was filed in the above identified application. It is noted that the second page of the IDS By Applicant was improperly scanned in PAIR as TRANS.LET. As a result, it appears from a review of the file, the NPL document listed on that second page has not been acknowledged by the Examiner as having been considered.

It is therefore respectfully requested that the Examiner acknowledge consideration of the NPL document filed on March 26, 2008. A copy of the second page listing the NPL document is enclosed herewith for the Examiner's convenience.

This is the second request to acknowledge the IDS since an earlier request was filed on September 13, 2010.

In view of the above, it is respectfully submitted that this application is now in condition for allowance, which action is promptly and respectfully solicited.

Respectfully submitted,

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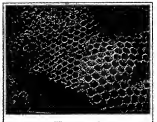
Honeycomb

From Wikipedia, the free encyclopedia



Honeycomb

A **honeycomb** is a mass of hexagonal wax cells built by honey bees in their nests to contain their larvae and stores of honey and pollen.

Beekeepers may remove the entire honeycomb to harvest honey. Honey bees consume about 8.4 pounds of honey to secrete one pound of wax,[1] so it makes economic sense to return the wax to the hive after harvesting the honey, commonly called "pulling honey" or "robbing the bees" by beekeepers. The structure of the comb may be left basically intact when honey is extracted from it by uncapping and spinning in a centrifugal machine—the honey extractor. Fresh, new comb is sometimes sold and used intact as comb honey, especially if the honey is being spread on bread rather than used in cooking or to sweeten tea.

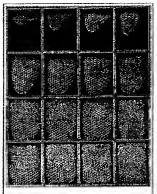
Broodcomb becomes dark over time, because of the cocoons embedded in the cells and the tracking of many feet, called *travel stain* by beekeepers when seen on frames of comb honey. Honeycomb in the "supers" that are not allowed to be used for brood (e.g. by the placement of a queen excluder) stays light coloured.

Numerous wasps, especially polistinae and vespinae, construct hexagonal prism packed combs made of paper instead of wax; and in some species (like *Brachygastra mellifica*), honey is stored in the nest, thus technically forming a paper honeycomb. However, the term "honeycomb" is not often used for such structures.

Honeycomb geometry

The axes of honeycomb cells are always quasi-horizontal, and the non-angled rows of honeycomb cells are always horizontally (not vertically) aligned. Thus, each cell has two vertical walls, with "floors" and "ceilings" composed of two angled walls. The cells slope slightly upwards, between 9 and 14 degrees, towards the open ends.

There are two possible explanations for the reason that honeycomb is composed of hexagons, rather than any other shape. One, given by Jan Brożek, is that the hexagon tiles the plane with minimal surface area. Thus a hexagonal structure uses the least material to create a lattice of cells within a given volume. Another, given by D'Arcy Wentworth Thompson, is that the shape simply results from the process of individual bees putting cells together: somewhat analogous to the boundary shapes created in a field of soap bubbles. In support of this he notes that queen cells, which are constructed singly, are irregular and lumpy with no apparent attempt at efficiency.[2]



The bees begin to build the comb from the top of each section. When